

INFLUENCE OF GRADE DETERMINATION ON GROWER RETURNS

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All potato contracts include some incentive clauses. Each processor includes those clauses that best suit their requirements. These incentive clauses include specific gravity, bruise free and various size clauses.

In addition to the above incentives, one contract pays an incentive for dirt percentage under 8% and deducts over 8%. Another clause pays an incentive when unusables are under 10% and deducts over 10%.

As well as the above incentives, all contracts pay on the bases of percent useable. This can vary considerably depending on whether it is based on a fresh grade or a process grade. The useable percentage will vary from 50% on a poor lot to 97% on a good lot. An average useable percentage would be about 85%.

Its obvious that grading is all important in determining what a grower gets paid.

TABLE 1. Example: Using Processor contract the maximum payment at 70% bruise free and better is \$12.50/ton. If the bruise free is 22% and below it would result in a deduct of \$11.50/ton. Thats a swing of \$24.00/ton. Add to that the difference of \$31.40/ton for 10 oz., \$12.75 for specific gravity and \$2.50 for sugar, the difference between the top payment and the bottom payment is \$70.65/ton (\$3.53/cwt). Processor 2 shows a swing of \$35.80 and Processor 3 a difference of \$98.00/ton (\$4.90/cwt).

As pointed out earlier each contract pays for useable potatoes as well.

The difference between 97% useable and 50% useable is \$32.90/ton \$1.64/cwt).

Keep in mind these numbers are extremes. Five year averages for the various incentives are as follows:

10 oz	35-42%
6 - 12 oz	48-54%
6 oz	54-60%
Bruise Free	64-70%
Sp. Gr.	1.080-1.083
Dirt	2-5%
Unusable	4-8%

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TABLE 2. Shows how the various contracts compare when you add the incentives to the base price and multiply that by the useable percentage. This results in the field run price, and if you are going to compare contracts the only realistic comparison must be on field run prices since no two contracts have the same incentives.

TABLE 3. Details how we calculate the field run prices.

In this particular contract the 10 oz clause payment and Specific Gravity are added to the Direct delivery contract to arrive at the useable return. The Useable percentage of 86% is multiplied by the useable return to arrive at the field run price. The processing cull payment is added to arrive at the final field run return (processing culls are small potatoes under 2" or 4 oz).

The Grower Storage return includes additional payment for bruise free and storage increments. March 15th is the average delivery that we compare all grower storage contracts.

This past season some unbelievable swings in bruise free occurred. Not only was there different bruise free observed between plants but there was also a severe change in the same plant when different criteria are used to determine bruise free.

Graph A compares the same lot of potatoes going to different plants of the same company. Field 1 average 39% at Location A and 63.5% at Location B. Field 2 average 17% at Location A and 46.6% at Location B.

The difference in Bruise Free at the two locations average 23.9%. This resulted in \$9.56/ton difference (.48¢/cwt), or \$286.80/acre. The red line is the low night time temperature. No correlation between Bruise Free and temperature is evident.

Another example of a wide swing in bruise free occurred at Processor C this year. It appears that the people doing the grading changed their method of scoring bruise free. You will see from Graph B that bruise free from October 1st thru the 8th averaged 73.9% while bruise free from October 9th thru the 14th averaged 42.2%. A difference of 31.7%. The solid line through the graph represents the low night temperature. Its impossible to show any correlation between low temperature and bruise free.

Graph C shows the effect of this change on one individual grower. Compared to last years bruise free, grower B had returns of \$22.50/ton less than 1986. This amounts to a total of \$675.00/acre.

It is evident from Graph D that there is some big differences between bruise free at different plants. E.g. the average bruise free at Processor A was 85% during September while at Processor B it was 56% - a difference of 29%.

During the month of October similar differences were observed. Processor A average was 39%, Processor B was 68% and Processor C was 61%. Here again its impossible to find a correlation between bruise free and low night temperature.

The return a grower receives on potato contracts is determined by the grade he receives on the samples that are graded. In most cases, the samples taken represents about one-half of one percent of the total potatoes delivered.

The way that the samples are taken and how they are graded determines if a grower is going to make money or lose money.

In order that sample taking reflects what a grower delivers, the samples must be representative of that load of potatoes. We have seen instances where these samples have not been taken correctly. This only adds to the disparities that have been observed.

In Washington, most of the grading is done by the Federal-State Inspection Service. The grading is done at a facility provided by the processor. In the Tri State area of Washington, Oregon, and Idaho, there are 24 locations where potatoes are graded and 1300 Inspectors involved. Each grading facility is different and it is difficult to standardize all facilities. We are working closely with the inspection service to try to standardize these facilities as much as possible. It is recommended that each grower designate someone to monitor the grading of their potatoes. Both the Processor and the Inspection Service encourage this, and it alerts growers first hand if there are any problems.

Table 1. Contract Incentive Payments

		Max	Min	Diff
Processor 1				
Bruise Free	(70)	12.50	(22) - 11.50	24.00
10 Oz	(40-48)	8.00	(0) - 23.40	31.40
Sp. Gr.	(89)	12.75	(75) - .00	12.75
Sugar	(-6)	00	(10+) - 2.50	2.50
				<u>70.65</u>
Processor 2				
Sp. Gr.	(89)	6.30	(70) - 5.50	11.80
Bruise Free	(75)	12.50	(27) - 11.50	24.00
				<u>35.80</u>
Processor 3				
Dirt	(0)	1.40	(15) - 1.40	2.80
Unuseable	(0)	3.00	(20) - 3.00	6.00
Sp. Gr.	(93)	8.40	(75) - 7.80	16.20
6 - 12 oz	(70)	15.00	(20) - 10.00	25.00
Bruise Free	(100)	24.00	(0) - 24.00	48.00
				<u>98.00</u>
Useable	(\$70)	67.90	(50) - 35.00	32.90

Table 2. Contract Comparisons (Using 5 Year Averages)

	EARLY DIRECT		DIRECT		COMPANY STORAGE		GROWER STORAGE	
	1986	1987	1986	1987	1986	1987	1986	1987 (March 15)
Processor 1 Field Run	71.65	70.11	63.42	61.89	68.57	66.99	78.34	76
Processor 2 Field Run	71.66	70.41	63.42	62.18	68.35	67.07	77.93	76
Processor 3 Field Run	72.07	70.74	63.83	62.51	69.85	68.48	78.13	76
Processor 4 Field Run	67.80	66.55	63.90	62.65	65.37	63.95	80.32	78
Processor 5 Field Run	-	-	68.68	67.32	-	-	82.28	80
Processor 6 Field Run	54.87	53.78	62.48	61.49	65.12	63.72	-	72
Processor 7 Field Run	-	65.80	61.06	59.89	66.55	65.36	-	

* Table 3.

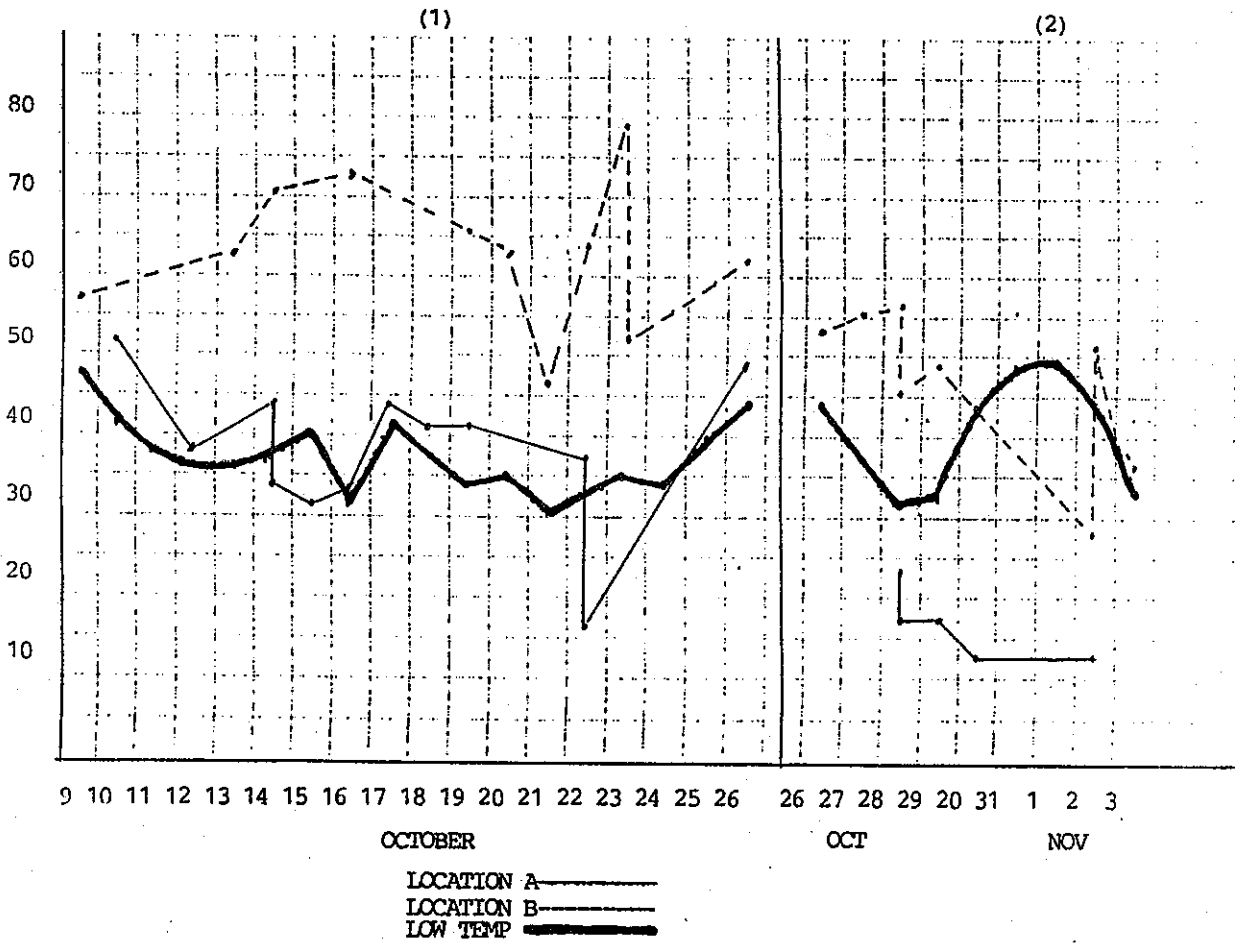
PROCESSOR A
1987 Contract Settlement
Using 5 Year Averages
For Incentives

<u>DIRECT</u>	<u>1986</u>	<u>1987</u>	<u>GROWER STORAGE</u>	<u>1986</u>	<u>1987</u>
Base	61.35	61.35	Base (March 15)	64.80	64.80
10 OZ (37.0)	5.70	6.50	10 OZ (38.0)	6.25	7.00
Sp. Gr. (1.081)	<u>9.00</u>	<u>9.00</u>	Sp. Gr. (1.082)	10.00	10.00
Useable Return	76.05	76.85	B. F. (70.0)	10.00	10.00
Useable (86.0)	X <u>86%</u>	X <u>86%</u>	Storage	<u>6.00</u>	<u>6.00</u>
	65.41	66.10	Useable Return	97.05	97.80
Proc. Culls (6.8)	<u>1.36</u>	<u>1.36</u>	Useable (88.0)	X <u>88%</u>	X <u>88%</u>
Field Run Return	66.77	67.46		85.41	86.07
			Proc. Culls (5.4)	<u>1.08</u>	<u>1.08</u>
			Field Run Return	86.49	87.15

* Graph A.

BRUISE FREE
Processor B - 1987

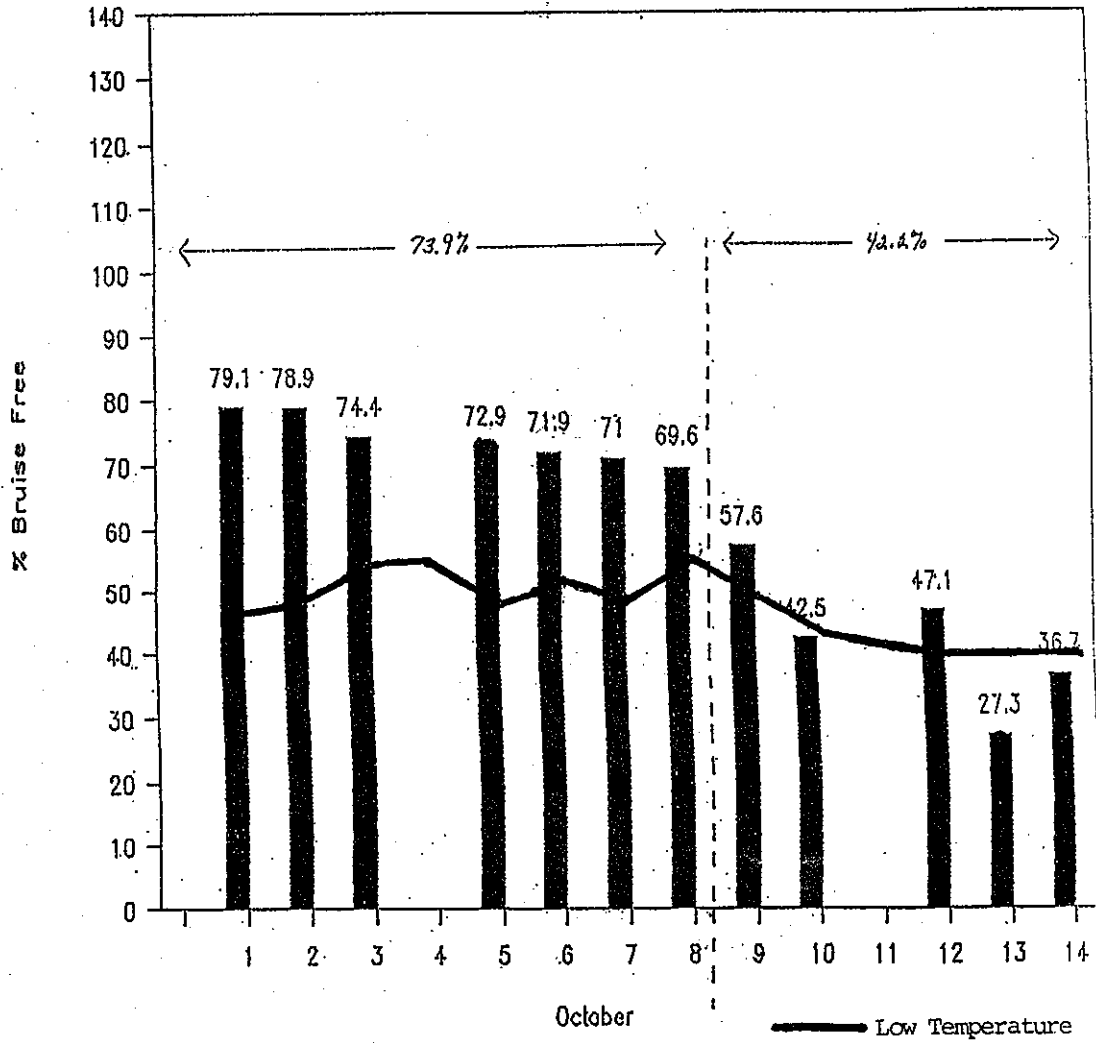
	Location A	Location B	Difference
Average (1)	39.0%	63.5%	24.5%
(2)	17.0%	46.6%	29.6%
			23.9%
Per Ton	- \$11.00	32.5%	- \$9.56
Per Acre	- \$330.00	- \$43.20	- \$286.80
Per Circle	- \$41,250.00	- \$5,400.00	- \$ 35,850.00



* Graph B.

PROCESSOR C - 1987

Bruise-Free



October 1-8	73.9%	+11.95	} \$15.85
October 9-14	42.2%	- 3.90	

Diff Per Ton \$15.85
 Per Acre \$475.00
 Per Circle \$59,435.00

* Graph C.

PROCESSOR C - 1987

Bruise-Free

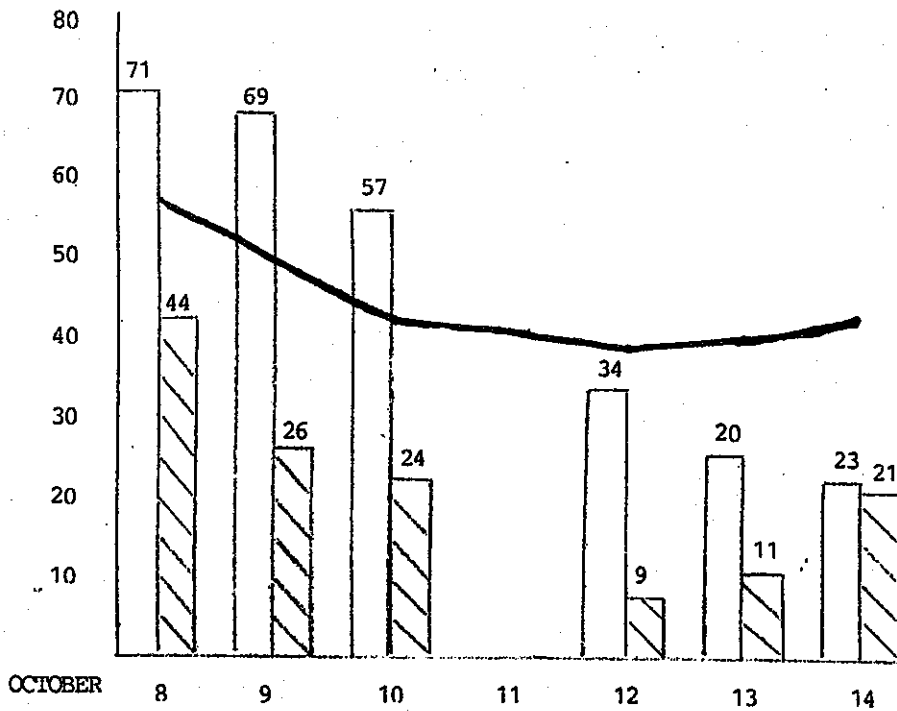
Grower B



Average Bruise Free (1986) 72.0%
 (1987) 22.0%

+ \$11.00/ton
 - \$11.50/ton
 - \$22.50/ton
 \$ 1.21/cwt

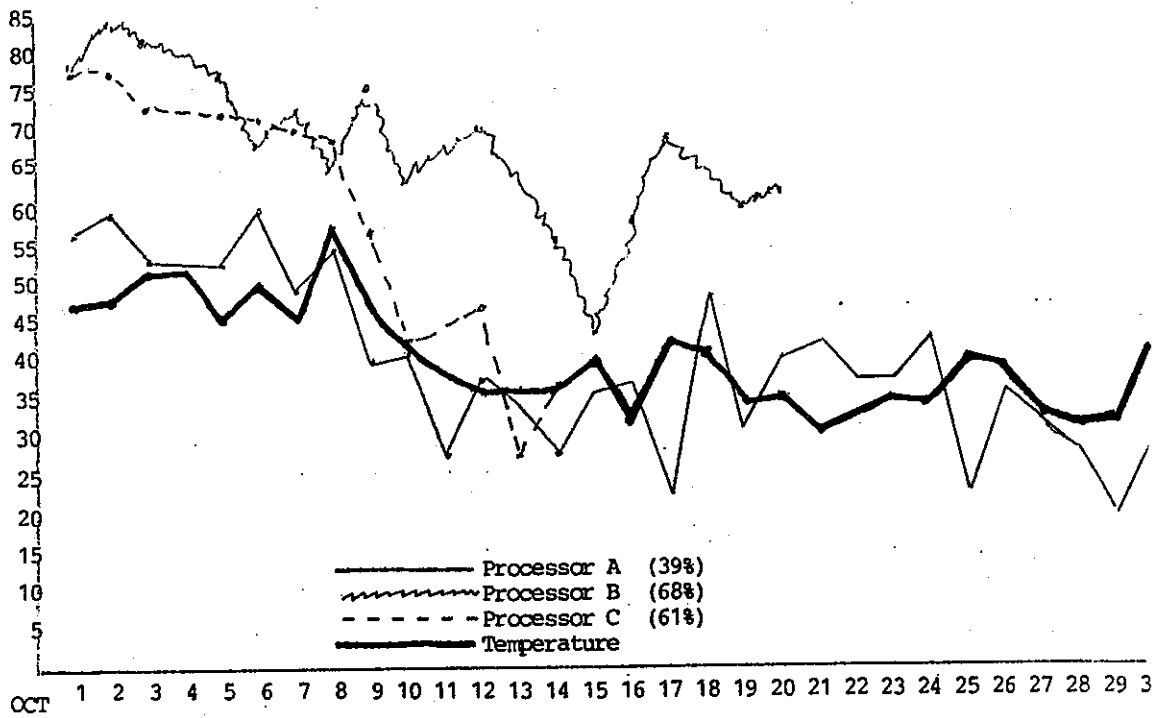
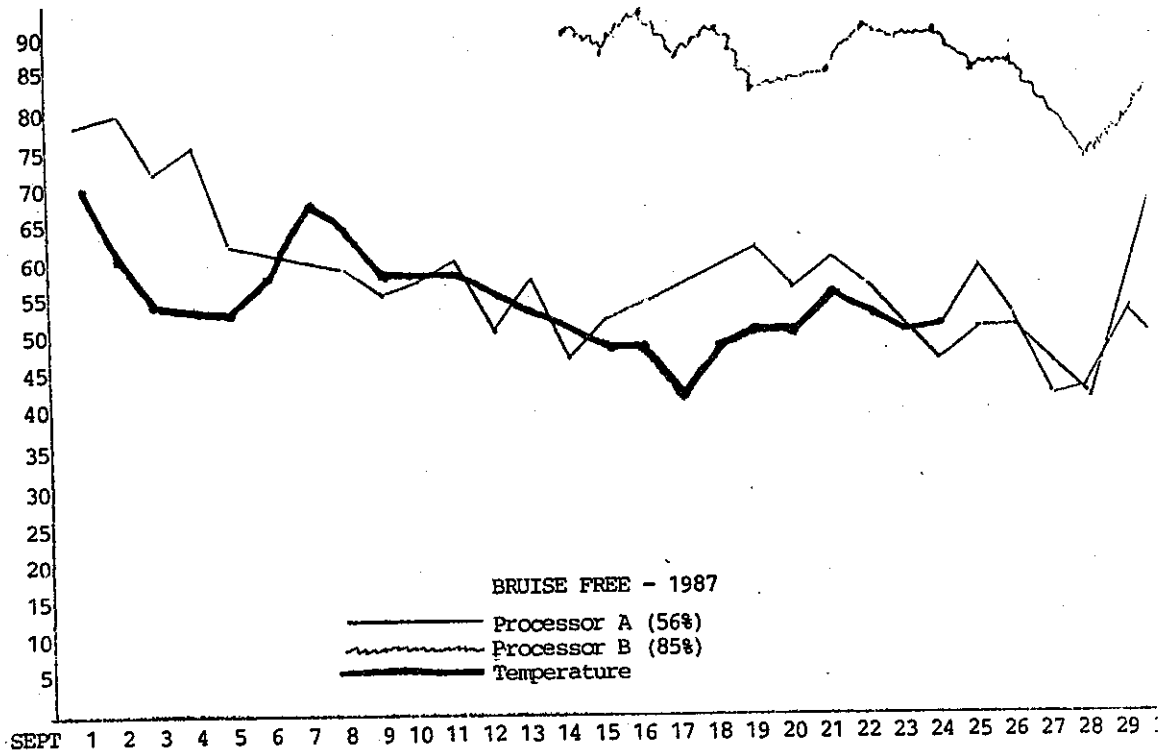
Yield (30 Tons)
 Circle (125 acres)

- \$675.00/acre
 - \$84,375.00/circle



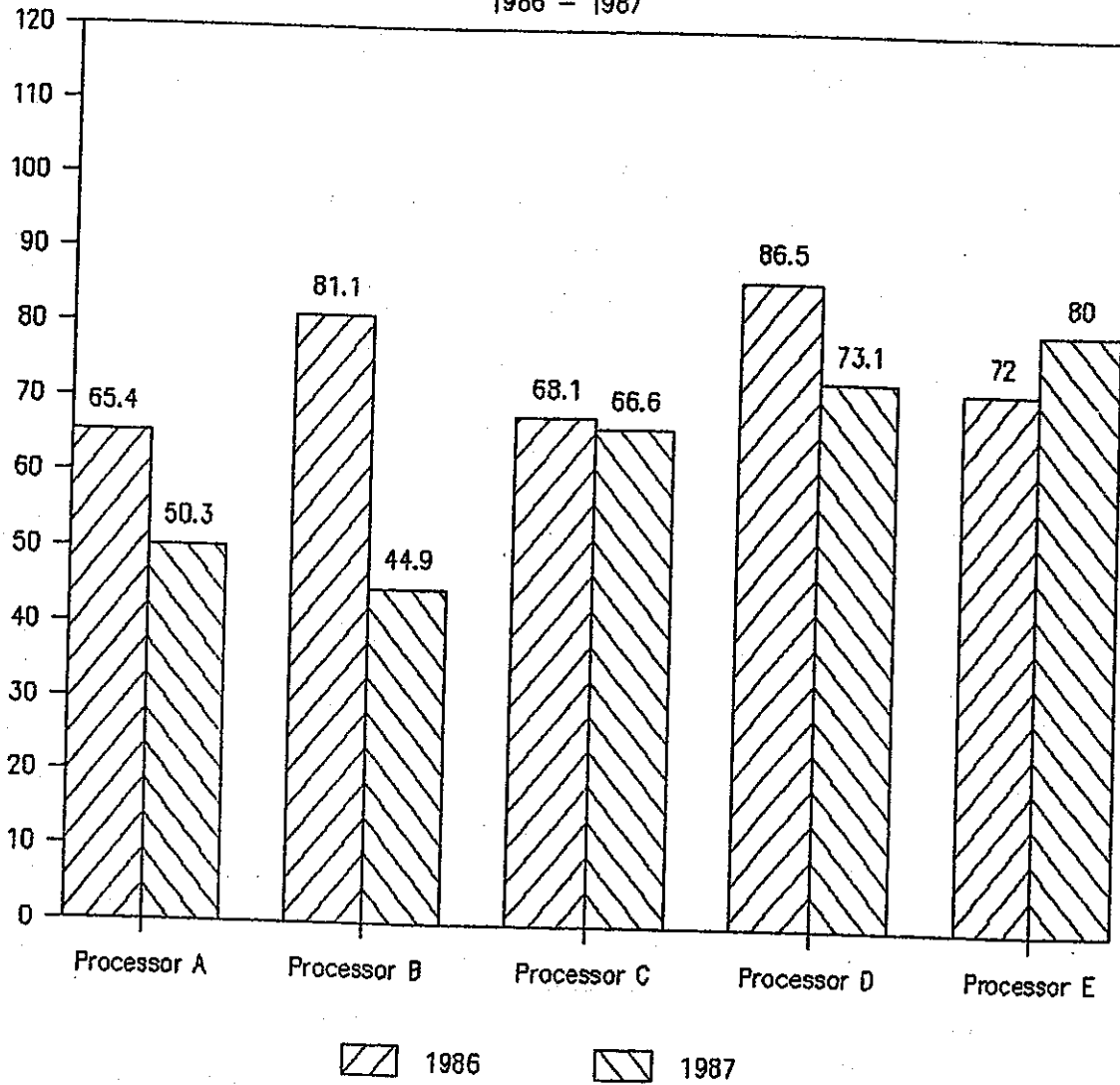
GROWER A  Average 46%
 GROWER B  Average 22%
 ————— Low Temperature

* Graph D.



Actual Bruise Free

1986 - 1987



The following paper was not available for publication in the 1988 Proceedings:

Current Status and Future Management of Colorado Potato Beetle in the
Northwest

by: K. Duane Biever